



Effectiveness of Med-education Training for the Contact Centre Team of Health Net Global (Apollo Hospitals)

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ABSTRACT

Introduction: Healthcare contact centres receive calls of different nature (Appointments related, Diagnostics, Treatment, Surgeries and General health Enquiries etc.,) and the majority of the agents working in these centres come from non-medical backgrounds. This knowledge gap can be bridged by providing structured medical education training to the contact centre agents.

Aim/Objectives: The aim of this study is to evaluate the effectiveness of providing medical education training to contact centre agents in order to reduce the knowledge gap and improve their ability to assist callers with medical issues.

Method: Standardized medical education training was provided to contact centre agents in the form of lecture videos. A survey and summative evaluation were conducted to assess the agents' learning outcomes and satisfaction.

Result: The survey results indicated that the medical education training provided to the contact centre agents was beneficial and helped them to better assist callers with medical issues. However, some areas for improvement were also identified.

Conclusion: The provision of structured medical education training to contact centre agents can reduce the knowledge gap and improve their ability to assist callers with medical issues. The results of this study indicate that this training can be beneficial and sustainable, with potential for growth in the market.

Key Words: Medical Education, Trainings, Contact Centre, Customer Support, BPO, Health Mentor, HealthNet Global, Apollo Hospitals

INTRODUCTION

Business call centers are essential components. They enhance customer interactions and services, provide effective communication, and generate revenue. Call centers address the complaints and difficulties of the customers. Customers start to trust the goods and services of a certain business when they receive quick and accurate responses. In other words, the business gains goodwill. These pleased customers return to the business and stay devoted to it for a long time. The brand's Customer Lifetime Value (CLV) rises as a result.¹

HealthNet Global (HNG) is one of the pioneers Health-Tech companies in India providing integrated telemedicine solutions and care platforms. The technology platform and assets are built to deliver maximum value to both external customers as well as various group companies in the Apollo ecosystem.² The Total number of individuals working under

HNG as CC agents are 200-250. Among which the study was conducted for the 41 CC agents, located in Hyderabad, Telangana, India. The contact centre was established in the year 2011 with the hybrid functionality (Inbound & Outbound Calls). HNG contact centre provides customer services related to Appointment booking, Surgery enquires & scheduling, international call handling, health check-ups, routing customer to service providers, communications via official email & WhatsApp. Currently, the estimated call volume range for inbound is 1800 to 2000 calls per day; outbound is 4500-5000 calls per day.

Inbound call process

The inbound call process at AHIL receives calls from customers for assisting in scheduling doctor consultation and confirming the time slot for appointment. The call begins by CC agent receiving incoming call from customer, basic customer details are collected, request for the selected/ guided

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specialist consultation is done, CC agent navigates to appointment booking screen, specific doctor's availability is confirmed. If the doctor is available for the requested timeslot and the appointment is booked then, the call is considered as closed. If the doctor is not available at the requested time slot, then to close the call, an alternate date, time or alternative doctor is suggested to the customer with assent. [Figure 1].

Outbound call process

The outbound call process of HNG involves outgoing calls to the customers for appointment follow up, rescheduling, missed appointments, reconfirmations, and lead management. Additionally, the calls are generated based on the requests generated from the healthcare information platforms such as Apollo 24/7, Practo, CPOE(Computerized Provider Order Entry) etc., The outbound process commences with identifying the call demand generated from the customers, the CC agent initiates the call to the customer, If the call is connected in first attempt, the customer need/concern is identified, the CC agent provides the resolution to the concern and the call is closed by sending a feedback link to the customer. [Figure 2].

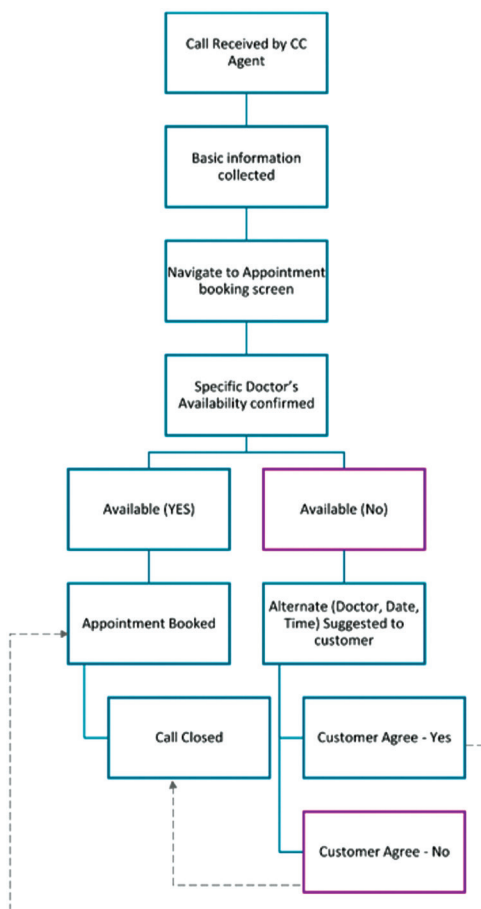


Figure 1: Inbound Process.

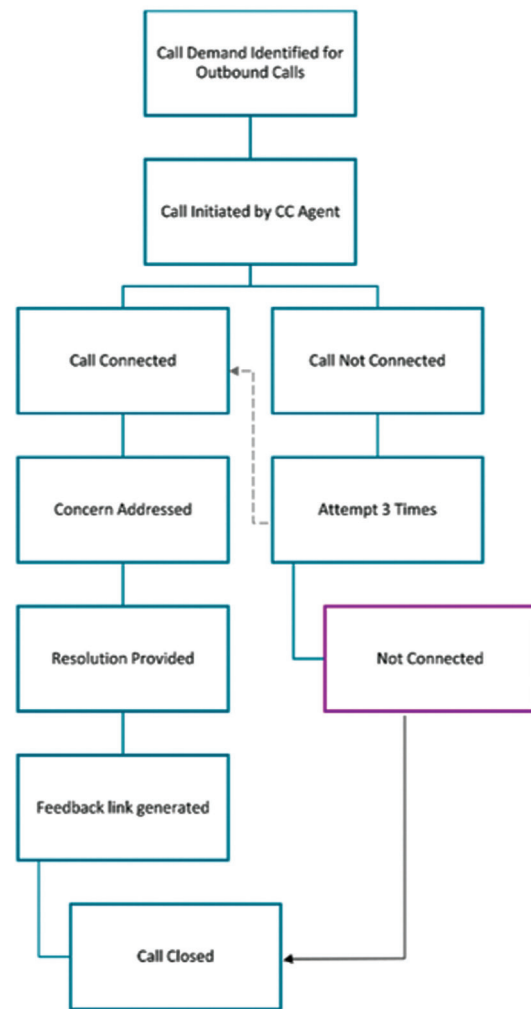


Figure 2: Outbound Process.

Study Need

A healthcare contact center majorly handles calls of healthcare origin, and the communication involves usage of medical terminology. On the other hand, the CC agents are non-medical graduates. HNG conceptualized of providing basic medical education to the contact center agents for that existing available information was searched, while seeking the literature it was noticed that no comprehensive studies were available on the significance of the basic medical education specific to the healthcare contact center agents. This notion led to the rise of the medical education-training program (Med-education) for the contact center agents and ultimately led to this study.

METHODOLOGY

Study site description

The study participants i.e., CC agents were from the Health-Net Global (HNG) Hyderabad, Telangana, India.

Study Time Period

September 2022 to October 2022 (2 Months)

Designing the course

The objective of the Med-education training program for the CC agents was to build awareness of the human body systems, illnesses of each system, choice of investigations, management and concerned specialty to refer.

Learning Management System (LMS) is a web-based application used to develop, deliver, and track learning of all employees including contact center agents of HNG. This LMS is a part of the bigger application suite developed by HNG.

Microsoft PowerPoint tool has been used to create the Med-education modules, for each human system there was one Training module created, for 10 human systems there were 10 modules created in total [Table 1].

Each module was segmented into three sections. First section consisted introductory information of human systems and its location in human body. The second section consisted of 3 I's (Indications, Illnesses, Investigations) of the respective human system. The third section consisted of information on concerned clinical specialty [Figure 3].

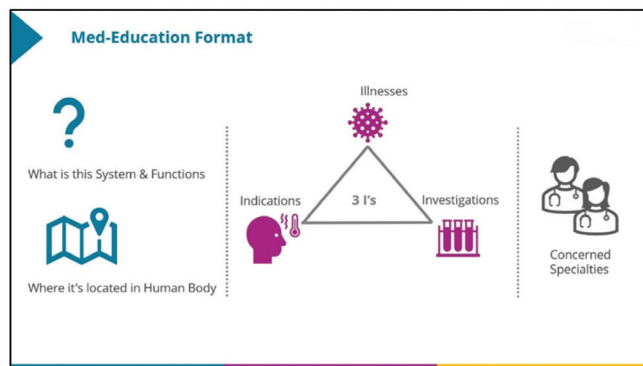


Figure 3: Module structure.

Table 1: Medical education Training Modules

Modules	Components
Skeletal system	- Structure & Functions of skeleton - Types of joints - Common diseases of Bones - Investigations & Management
Musculoskeletal system	- Muscle's anatomy - Different types of muscles in human body & their functions - Muscular Disorders, Investigations & Management - Notable cases with muscular conditions

Nervous system	- Anatomical division of central & Peripheral nervous system - The Brain & Spinal Cord - Neuro transmission - The Junction - Common disorders, Investigations & Management
Respiratory system	- Function of Respiratory systems - The cardiac connection of respiratory system - Respiratory conditions & Symptoms - Investigations & Management
Cardiovascular system	- Anatomy & physiology of Cardiovascular System - Circulation of blood - Common conditions & symptoms - Investigations & Management
Gastrointestinal system	- Anatomy of Gastrointestinal tract (Organs & Their functions) - Endocrinal organs - Investigations & Management
Reproductive system	- Anatomy and Functions - Common conditions - Investigations & Management
Urinary system	- The anatomy & physiology of renal system - Symptoms, Investigations & Management of Renal diseases
Endocrine system	- Anatomy & Physiology of endocrine system - Glands, Hormones & Their Functions - Hormones from Gender perspective - Symptoms, Disorder, Investigations & Management
Immune system	- Components involved in Immune system - Line of defence (Cells & Their Functions) - Factors affecting Immunity - Immunological conditions & Auto immunity - Symptoms, Investigations & Management

Video style specifications

An expert team of Content developers have prepared animation enabled power point presentations on the defined 10 modules on the human body system for the medical education program. These presentations were later transformed into self-learning videos with tutor's voice [Figure 4]. The prepared videos were sent for peer review and the changes were made accordingly. The final reviewed & approved videos were later sent for video editing.

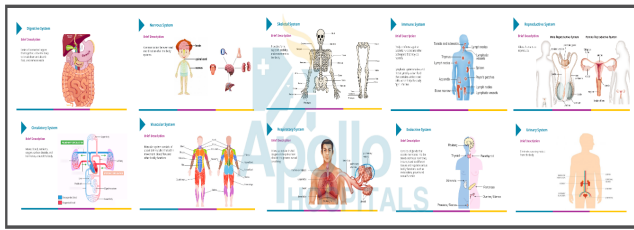


Figure 4: Screen shots from the course modules.

Course Completion Controls

The aim of the training controls was to preferentially allow the user to complete all the modules in such a manner where progress of each module can be tracked, and the completion status can be monitored.

A course module may consist of several chapters. All the chapters of the course are initially locked except chapter one. The first chapter is always a pre-assessment chapter, which consists of multiple-choice questions. This allows the trainer to assess the module specific knowledge of the trainee. Once the pre-assessment is completed only then the next chapter which consists of the self-learning videos will be unlocked.

The Module specific videos cannot be skipped directly to any point. However, the user can optimize viewing speed at the maximum rate of 2x. The video can be paused if required.

In order to assess the next chapter, the user has to watch the entire length of the video. Once all the module specific videos are watched entirely by the user then the post-assessment chapter gets unlocked. The user must answer all the MCQs correctly with the passing score of 70%, then only the specific module will be completed [Figure 5].

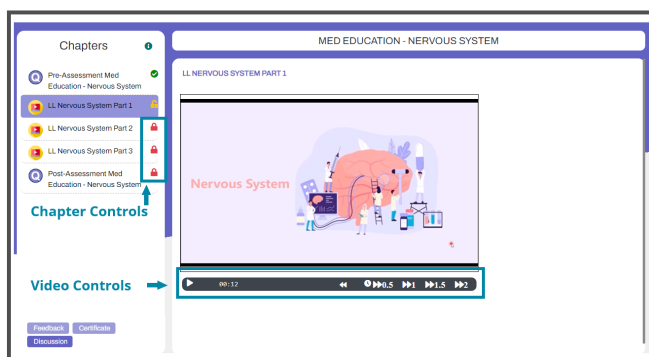


Figure 5: course completion controls (chapter & video).

Training Execution

The Med-education training courses created and uploaded into LMS. Courses were assigned to all contact center agents. Course completion statuses were continuously monitored, and support was provided. Trainer Application (LMS) – Trainer application of LMS allows user to create & assign

courses to trainee and monitor completion progress. Trainee Application (LMS) – Trainee application of LMS allows user to join & complete the session. Each Module Consisted Of: Pre-Assessment, Self-learning videos & Post Assessment chapters. Each Assessments Consist Of: 10-20 Multiple Choice Questions. Each video module Consist Of: 2-4 Videos of the specific system [Figure 6].

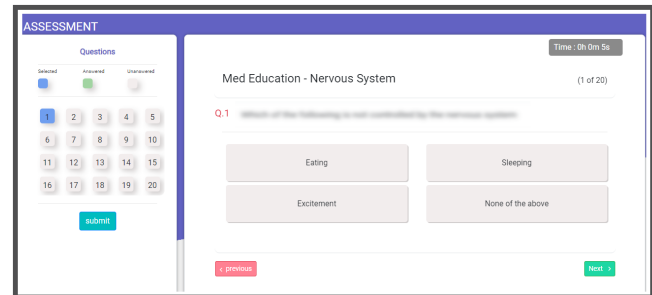


Figure 6: Assessment Chapter.

Survey Design

The Med-education course was evaluated by the survey which consisted of 23 questions out of which the nominal scale questions (0-5) were 6 and questions related to user background details were 8, the demographic questions were 4, questions related to job applicability were 4 and 1 question for user's consent for the survey participation.

Survey Administration

The users were provided the Med-education satisfaction survey on the Microsoft forms via its link shared across the CC agents to their respective email IDs. The responses generated from the survey were analyzed by Microsoft Excel.

RESULTS

Profile of participants

The course had a total of 41 contact center agents enrolled. These 41 CC agents received the Med-education training from the period December 2021 to November 2022 for 12 months. Out of the 41 CC agents the majority participants were female under the 20-25 years age group. Most of the CC agents belonged to Telangana followed by Andhra Pradesh, Karnataka, Tamil Nadu, Bihar, Punjab states of India. The CC agents were from the assistant and senior assistant roles and the majority of them had 2-3 years of experience. The oldest person was 42 years old and the youngest was 20 years old. With respect to the educational qualification 66% were graduates followed by post-graduates (17%) & higher secondary education (17%) [Table 2].

Among the CC agents 78% did not study biology in their higher secondary education. Of them 22% were from science stream during the higher secondary education.

Table 2: Sociodemographic profile

Sociodemographic profile (n=41)		
Gender	n	%
Female	26	63%
Male	15	37%
Age group		
20-25	13	32%
26-30	15	37%
30-35	12	29%
35+	1	2%
Native State		
Andhra Pradesh	4	10%
Bihar	1	2%
Karnataka	1	2%
Punjab	1	2%
Tamil Nadu	1	2%
Telangana	33	80%
Level of Education		
Higher Secondary (12th)	7	17%
Post-Graduate / master's level education	7	17%
Under-Graduate / bachelor's level education	27	66%
Career Experience		
<1 year	5	12%
1-2 years	16	39%
3-4 years	13	32%
>5 years	7	17%

Evaluation & Feedback

Of the 41 agents who agreed to complete the Med-education training course, 100% of them successfully completed the course and because access to the course had a deadline and would be restricted afterwards to perform data analysis, all the participants completed the modules within the set timeline.

A survey questionnaire was circulated among the CC agents to evaluate the training program and the learning impact created among the agents. The feedback showed the course relevancy levels as 83% effective; 10% very effective; 5% as not sure and 2 % as not relevant.

According to the course feedback evaluation, using a nominal scale of 0-5, the CC agents rated the following questions: how much better you are able to understand a caller's concerns after the Med-education training? 37% rated as 5; 49% rated as 4; 12% rated as 3 and 2% rated as 2. How much better you are able to guide or direct a caller to appropriate resolution after the Med-education training? 44% rated as 5; 41% rated as 4; 15% rated as 3. How much better you are able to understand medical/clinical terminology during a conversation after the Med-education training? 37% rated as 5; 44% rated as 4 and 20% rated as 3. How would you Rate the overall "ease of access" of the Med-education training course? 37% rated as 5; 49% rated as 4; 15% rated as 3. How would you Rate the content prepared on the "ease of understanding from the point-of-view of a non-medical background?" 37% rated as 5; 44% rated as 4; 20% rated as 3. How would Rate the overall "content and design" of Med-education course? 41% rated as 5; 39% rated as 4; 20% rated as 3 [Table 3].

Table 3: Course feedback questionnaire

	5 (Excellent)	4 (Very good)	3 (Good)	2 (Fair)	1 (Poor)
How much better you are able to understand a caller's concerns after the Med-education training.	15 (37%)	20 (49%)	5 (12%)	1(2%)	-
How much better you are able to guide or direct a caller to appropriate resolution after the Med-education training.	18(44%)	17(41%)	6(15%)	-	-
How much better you are able to understand medical/clinical terminology during a conversation after the Med-education training.	15(37%)	18(44%)	8(20%)	-	-
How would you Rate the overall "ease of access" of the Med-education training course.	15(37%)	20(49%)	6(15%)	-	-
How would you Rate the content prepared on the "ease of understanding from the point-of-view of a non-medical background".	15(37%)	18(44%)	8(20%)	-	-
How would you Rate the overall "content and design" of Med-education course.	17(41%)	16(39%)	8(20%)	-	-

In addition to the course feedback collected, the key utility aspect of the medical education program was as follows:

1. Recommendation of the medical education program to the healthcare contact centre agents- 90.25% of the CC agents endorsed that medical-education training to fellow contact-centre agents working in the healthcare industry[Figure 7]

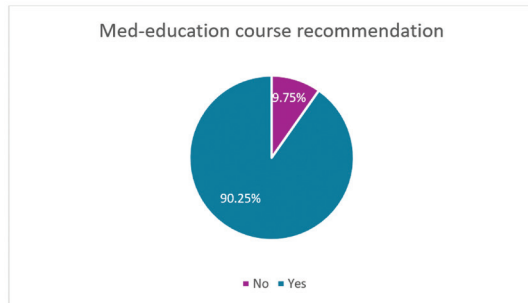


Figure 7: Medical education course recommendation.

2. Medical education training helped CC agents in average of 30.5% of daily calls to better guide or direct customer to appropriate. [Figure 8]

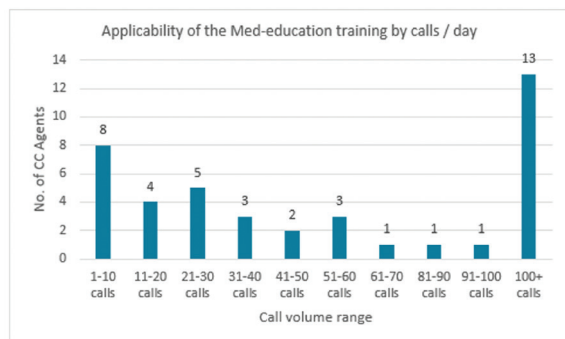


Figure 8: Application of medical education on call volume.

3. The most useful module from the 10 training modules on human systems was Nervous systems about 18%, followed by cardiovascular system 15% and Gastrointestinal system 13%[Figure 9].

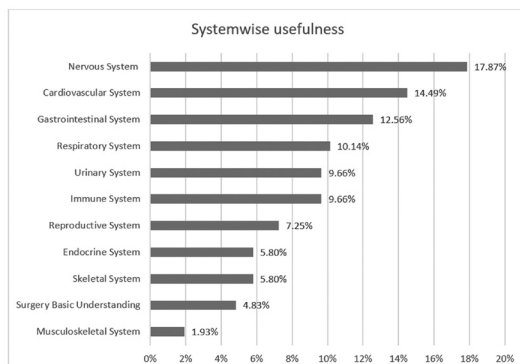


Figure 9: Most important system to learn for the job perspective.

4. The cumulative rating for the medical education training given by the CC agents states that 4.3/5 CC agents believe that the medical education training has enabled the CC agents to route the customer for an appropriate resolution [Figure 10].

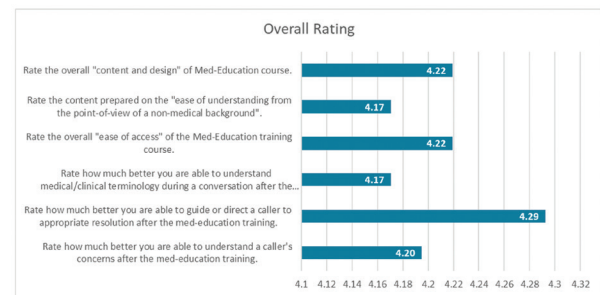


Figure 10: Med-education course overall rating by participants.

DISCUSSION

The present study objective was to evaluate the cc agents learning results and applicability and impact of the training imparted on their day-to-day handling of calls. In our study of the 41 CC agents, females (63%) constituted higher than males (37%). The majority of the CC agents (37%) belonged to 26-30 years age group, followed by 20-25 years age group (32%) and by 30-35 years age group (29%). Among the CC agent's majority belonged to Telangana (80%), followed by Andhra Pradesh (10%).

With respect to the education qualification of the CC agent's majority had completed Bachelor's /Under-graduate degree 66%, followed by 17% by High School & Post-graduate degree. The CC agents' highest experience belonged to 1-2 years (39%); followed by 3-4 years (34%); more than 5 years (17%) and less than 1 year experience was (12%).

When asked about which human system received majority call assistance, the nervous system module received 18% as the highest response.

Our study has the novelty that it is the unique comprehensive training program and study associated, conducted in India on the significance of the basic medical education specific to the healthcare contact center agents. The results of our study suggested that medical education training helped CC agents in more than 30.5% of daily calls to better guide or direct customer to appropriate resolution.

CONCLUSION

The medical education-training program has been beneficial to the contact center agents in routing the healthcare concerns of the customers effectively. After the promising results of the

study on Med-education training program, the training program is included as mandatory training for every new CC agent's onboarding in the organization.

This impact created by the training program has led to the increase in the satisfaction of the clients/stakeholders and with this new business opportunities are being secured. This program has imparted basic know-how of domain specific knowledge and common terminology and facts to contact centre agents to improve their efficiency in fulfilling their duties as well as ensure customer satisfaction. Furthermore, this program has built in confidence of our clients on our expertise and improved our scope of business as well.

Limitations

There are several study limitations to take into account, albeit they are unlikely to have a significant impact on the results. The sequencing of the videos and survey weariness may have had an impact on the agents' responses because they watched the videos in multiple sitting. It's possible that certain remarks relate specifically to the viewing circumstances. However, our results are consistent with earlier studies' conclusions that outlined the qualities of service evaluation of online courses.^{3,4,5}

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Transparency Statement

The Authors affirm that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Writing-review & editing: Prashant Janjal, Akhila Kosuru

Project administration-Mukul, Akhila Kosuru

All authors have read and agreed to the published version of the manuscript.

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